

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA



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Order Instituting Investigation into the
State of Competition Among
Telecommunications Providers in
California, and to Consider and Resolve
Questions raised in the Limited
Rehearing of Decision 08-09-042.

Investigation 15-11-007
(Filed November 5, 2015)

**REPLY BRIEF OF
THE OFFICE OF RATEPAYER ADVOCATES**

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The Office of Ratepayer Advocates (ORA) submits this Reply Brief pursuant to the schedule set forth in the July 1, 2016 *Scoping Memo And Ruling Of Assigned Commissioner And Administrative Law Judge* (Scoping Memo).

I. INTRODUCTION

The Communications Industry Coalition (Coalition or “the carriers”)¹ argues in its Opening Brief (OB) that competition in the telecommunications market in California has “increased significantly” and continues to “ensure just and reasonable wireline voice service rates.”² The carriers overstate consumer telecommunication choices in their definition of the marketplace, lumping together texting, email, social media, smartphones, and over-the-top (OTT) applications, with traditional landline voice service.³ However, the carriers conflate the concept of “choice” with “substitutability.”

¹ The Coalition consists of AT&T California (U 1001 C), New Cingular Wireless PCS, LLC (U 3060 C), Comcast Phone of California, LLC (U 5698 C), Consolidated Communications of California Company (U 1015 C), Consolidated Communications Enterprise Services, fka SureWest Televideo (U 7261 C), Citizens Telecommunications Company of California (U 1024 C), Frontier California Inc. (U 1002 C), Frontier Communications of America, Inc. (U 5429 C), Frontier Telecommunications for the Southwest Inc. (U 1026 C), Cox California Telecom, LLC (U 5684 C), T-Mobile West LLC (U 3056 C), Time Warner Cable Information Services (California), LLC (U 6874 C), Charter Fiberlink CA-CCO, LLC (U 6878C), and the California Cable & Telecommunications Association.

² Coalition OB at 2.

³ Coalition OB at 2.

As explained in detail herein, other forms of communication, such as texting or social media, place no competitive pressure on prices or services offered by the dominant wireline carriers because they are not substitutes.

Despite the carriers' promises that prices are "just and reasonable," prices for wireline service (traditional residential landline telephone service and Voice over Internet Protocol (VoIP)) and broadband Internet service have risen, and quality has deteriorated. Rising prices and low service quality are the hallmarks of a non-competitive marketplace. One need only compare the wireline industry to the wireless industry, which is somewhat competitive, to see that prices for wireline have risen steadily while prices for wireless services have fallen.

The Coalition also base their overly broad definition of the market on the allegedly "extensive evidentiary record" that was developed in 2005-06 in the Uniform Regulatory Framework (URF) decisions,⁴ but *do not to adequately address the extensive record that was produced, developed, and analyzed in this proceeding*. Rather than address the current state of the telecommunications market in California, the carriers use findings and conclusions from over 10 years ago. Moreover, the California Public Utilities Commission (Commission) itself has already found that the *URF decisions lacked an adequate record*, and thus granted rehearing. It makes no sense for the carriers to cite to the record in URF to support their allegations of a competitive marketplace, after the Commission determined that the record in URF was inadequate.⁵

Notably, the carriers do not address the market concentration data and analysis (Herfindahl-Hirschman Index (HHI) and the Market Dominance Index (MDI)) presented by ORA. The subscription and deployment data overwhelmingly points to a marketplace that is highly concentrated, according to the standards developed by the U.S. Department of Justice. The carriers' response is to attempt to include forms of communication in the

⁴ Decisions (D.) 06-08-030 (URF I) and D.08-09-042 (URF II).

⁵ D.15-11-023 at 9: "the assertion of error relating to the lack of a record on "what the 'market forces' would actually produce for rates" (and whether such rates would be just, reasonable, and affordable) are more substantive, and require a grant of limited rehearing."

definition of “the market” that are clearly not substitutable for wireline and broadband services, and are not in competition with those services.

The carriers also continue to challenge the Commission’s authority to obtain and analyze data, despite the Commission’s mandate to ensure “the continued affordability and widespread availability of high-quality telecommunications services,” to encourage “the development and deployment of new technologies,” and to promote “lower prices, broader consumer choice, and avoidance of anticompetitive conduct.”⁶ Clearly, carrying out this mandate in an effective way requires gathering and analyzing data, especially relating to price and availability of wireline and broadband services. As discussed more thoroughly below, there is no FCC preemption of the Commission’s data-gathering efforts, and the State has fully authorized the Commission to gather the data it needs to fulfill its statutorily-mandated goals.

Below, ORA responds to each argument made by the Coalition, in the order in which it appears in the Coalition’s OB.

II. SCOPE AND JURISDICTION

The Coalition OB contains several errors regarding the scope of this case and the Commission’s jurisdiction to gather data and conduct a review of market.

First, the Coalition incorrectly argues that the Scoping Memo limited this proceeding to the “voice services market”.⁷ Second, they falsely claim that any attempt to exercise jurisdiction over broadband or VoIP services would be “unlawful” under Public Utilities Code Section 710.⁸ Third, they misstate an FCC order, claiming that broadband is “jurisdictionally interstate” and therefore preempts the Commission’s actions.⁹

⁶ Public Utilities Code Section 709. All references herein are to the Public Utilities Code unless otherwise noted.

⁷ Coalition OB at 9.

⁸ *Ibid.*

⁹ *Id.*

The Order Initiating Investigation (OII), which should be considered as a more authoritative source than the Scoping Memo for defining the scope of this proceeding, includes the following issue in the section entitled “General Scope”: “How much competition is there for advanced telecommunications services at the new national standard of 25 Mbps down (and 3 Mbps up)?”¹⁰ Attached to the OII is Information Request (IR) #12, which includes the same scoping question. This is a clear statement of the Commission’s intent to include broadband in its examination of telecommunications market.

Contrary to the assertion by the carriers, the Scoping Memo did not limit or change the scope of this proceeding. The Scoping Memo specifically notes that some parties “suggested that any inquiry into competition in the wireless and broadband markets be made only adjunct to the main inquiry regarding competition in the landline telephone market.” But the Scoping Memo rejected such a limitation, stating “we must conduct a rigorous examination of the telecommunications marketplace to analyze the competitive forces acting upon traditional landline services.” The Issues and Briefing Outline attached to the Scoping Memo included the category of “broadband providers” as a separate market, and also included broadband in its consideration of deployment and subscription data. In addition, under “Market Performance and Development” the Issues and Briefing Outline included broadband as a category to analyze.

These references are consistent with other issues included in the Preliminary Scoping Memo in the OII. For example, another key factor in the argument regarding broadband competition is substitutability. IR #9 asks parties to address “the extent to which wireless and wireline services are substitutes for one another, or separate markets.”

Next, it is simply incorrect to assert that Section 710 prevents the Commission from gathering data and monitoring VoIP services. Section 710(f) specifically reserves the “commission’s ability to continue to monitor and discuss VoIP services.” Section

¹⁰ See OII at 14. Federal statute defines “advanced telecommunications capability” to include “broadband telecommunications capability.” *Verizon v. FCC*, 740 F3d 623, 635 (D.C. Cir. 2014), *citing* 47 U.S.C. §
(continued on next page)

710(c)(4) preserves the “commission’s authority to require data and other information pursuant to Section 716.” Moreover, as noted above, Section 709 contains a clear mandate to the Commission to ensure that broadband services are widely available and affordable, and that effective competition is flourishing among broadband carriers.¹¹ Carrying out this mandate necessarily involves measuring and analyzing the state of competition for VoIP services.

Finally, the carriers misrepresent the scope of the FCC’s *Open Internet Order*, stating that the *Order* “circumscribes” the Commission’s authority to regulate broadband.¹² However, the Scoping Memo re-affirms that this proceeding involves “gathering information about the state of the telecommunications market” and not rate regulation,¹³ and the *Open Internet Order* does not preempt states from gathering data.

In 2015, the FCC reaffirmed its longstanding conclusion that broadband Internet access service (BIAS) is jurisdictionally interstate for regulatory purposes.¹⁴ However, the FCC noted that notwithstanding the interstate nature of BIAS, states “of course have a role with respect to broadband” and the fact that it is jurisdictionally interstate does not “by itself preclude all possible state requirements regarding that service.”¹⁵ With regards to the state’s role in gathering data about broadband, the FCC stated: “Given the specific federal recognition of a State role in broadband data collection, we anticipate that such State efforts will not necessarily be incompatible with the federal efforts or inevitably stand as an obstacle to the implementation of valid federal policies.”¹⁶ Thus, there is clearly no federal preemption of the Commission’s attempts to gather data here.

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1302(d)(1).

¹¹ Section 709(a) – (h).

¹² Coalition OB at 10.

¹³ Scoping Memo at 5.

¹⁴ *Protecting and Promoting the Open Internet*, GN Docket No. 14-28, Report and Order on Remand, Declaratory Ruling, and Order, FCC 15-24 (rel. Mar. 12, 2015) (*Open Internet Order*) at ¶ 431.

¹⁵ *Id.*, Fn 1276, citing as an example of an explicit role for States in the NARUC Broadband Data Order, 25 FCC Rcd at 5054-55, at ¶ 9.

¹⁶ *Ibid.*

The FCC's *Open Internet Order* precludes states from imposing obligations on broadband service that are "inconsistent" with the regulatory scheme adopted in the *Order*.¹⁷ The FCC made clear, however, that its reaffirmation of BIAS as an interstate service for regulatory purposes does not preclude all state commission action in this area, just that which is inconsistent with the federal regulatory regime adopted in the *Order*.¹⁸ There is nothing in this proceeding that is inconsistent with any of the regulatory issues discussed in the *Open Internet Order*, which include policies such as no blocking or throttling, no paid prioritization, increased transparency, and forbearance from some of the provisions of Title II of the 1996 Telecommunications Act. None of these federal policies are inconsistent with the Commission's attempt to gather and analyze broadband data.

III. DISCUSSION

A. Defining the Market

The carriers erroneously state that the definition of the relevant product market should be limited to "the market for retail voice service."¹⁹ As stated above, the carriers point to conclusions made in the 2006 URF decision but fail to recognize that those 2006 conclusions were not supported by the evidentiary record and are no longer ripe for consideration, hence the granting of the rehearing application from ORA and TURN. ORA has pointed out, through in-depth analysis in the testimony and opening brief, that there is not one telecommunications market in California. Instead, there are multiple separate telecommunications markets. In this proceeding, ORA provides an analysis of the several relevant product markets and the geographic market relevant to each product market. The product markets include the residential wireline voice telephone service market and the residential broadband Internet access market at speeds of at least 25 Mbps

¹⁷ *Open Internet Order*, at ¶ 276, Fn. 708.

¹⁸ See *Id.*, at Fn 708.

¹⁹ Coalition OB at 11.

download and 3 Mbps upload (25/3).²⁰ For the relevant geographic market definitions, the extent of ORA's competition analysis is limited to the service providers available at the consumer's specific location. Specifically as it pertains to the 25/3 broadband Internet access market, ORA analyzed data at a census block or census tract level and summarized it by county or Metropolitan Statistical Areas (MSAs).

The carriers point to the 2015 Communications Division (CD) report that states, in part, that "most consumers have more than one technology option for their communications."²¹ However, this statement, as with much of the Communications Division's analysis, was made in the context of assumed intermodal competition. The CD report does not investigate intermodal substitution. Instead, the CD report assesses the telecommunications market in California with the presupposition of widespread intermodal substitution based on the URF decisions, the same Commission decisions that are the subject of this rehearing due to a lack of an evidentiary record concerning competition. The CD report refers to URF I, stating "[t]he Commission's regulatory policy relies upon this intermodal competition as the foundation of its consumer choice policy"²² and CD's analysis is built upon this presupposed assumption.

The carriers' incorrect and limited definition of the telecommunications market in California, in addition to their use of unsound metrics as described in more detail below, should give the Commission pause when considering the carriers' claims that telecommunications competition in California is "stronger than ever."²³

²⁰ 25 Mbps download and 3 Mbps upload is the FCC definition of advanced telecommunications service ; See, *Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion, and Possible Steps to Accelerate Such Deployment Pursuant to Section 706 of the Telecommunications Act of 1996, as Amended by the Broadband Data Improvement Act*, FCC GN Docket No. 14-126; *2015 Broadband Progress Report and Notice of Inquiry of Immediate Action to Accelerate Deployment*, FCC 15-10, Released February 4, 2015 at ¶ 3.

²¹ Coalition OB at 11.

²² CPUC Communications Division, *Market Share Analysis of Retail Communications in California June 2001 through June 2013*, Jan. 5, 2015 at 5; D.06-08-030.

²³ Coalition OB at 11.

1. One Unified Market, One Market With Sub-markets? Separate Markets?

a) Are mobile services a substitute for wireline services?

The Coalition argues that mobile (wireless) service is a substitute for wireline service, and should therefore be considered part of the voice communications market.²⁴ As ORA explained at length in its OB, for the majority of households in California, wireless is not a substitute for wireline service, demonstrated by the fact that the majority of households in California subscribe to and use both services.²⁵ Wireline service provides many functions that wireless does not: reliable access to 911, residential alarm service, medical monitoring, and other specific needs that cannot be met by wireless service.²⁶ In many other ways, wireline continues to be an inferior service; for example, wireline voice services continue to offer restrictive local calling areas, additional charges for voice mail, charges for custom calling features (such as call waiting, call forwarding, caller ID), and usage-based charges for non-local calls.²⁷ In addition, wireless is simply not available to many people in remote rural counties.

The carriers also rely heavily on the antiquated URF findings, which as discussed above have been found to be inadequate.²⁸ The URF decisions cannot be relied upon, since the Commission found that the underpinnings of those decisions were inadequate. Moreover, the Commission has opened this proceeding *for the express purpose of considering new data* that accurately depicts the current telecommunications market.

The carriers ignore the pricing data put forth by ORA, and instead focus heavily on the decreasing number of wireline subscribers.²⁹

The carriers rely primarily on their own economist witnesses, Dr. Aron, Dr. Katz

²⁴ Coalition OB at 12.

²⁵ See ORA OB at 21.

²⁶ Exhibit 16 at 24.

²⁷ ORA DR 1-3, responses of AT&T, Verizon/Frontier, and Consolidated Communications.

²⁸ D.08-09-042.

and Dr. Topper, to argue that the availability of wireless service constrains wireline prices. Their theory is that wireless voice service is a sufficiently close substitute for wireline voice such that any attempt by wireline carriers to raise wireline prices would be unprofitable, since customers could allegedly “easily” respond to the price increase by discontinuing wireline service in favor of wireless.

The carriers’ theoretical claim can be tested by comparing *actual* wireline prices to wireless prices over the post-URF time frame, a period in which wireline prices have been deregulated. ORA has demonstrated that wireless prices are clearly *not* constraining wireline prices. In the decade since the adoption of URF, wireline prices in California have risen by roughly 40%, while wireless prices have fallen by approximately 50%.³⁰ Considering the costs of calling features and add-ons (i.e., voicemail, long distance, caller ID, etc.), wireless voice service costs less than a comparable wireline service.

The ongoing decrease in wireless prices can also be measured by the wireless carriers’ “Average (monthly) Revenue per User” (ARPU), a widely-accepted composite measure of wireless price levels – as regularly reported in the FCC’s “Annual Report and Analysis of Competitive Market Conditions With Respect to Mobile Wireless, Including Commercial Mobile Services.”³¹ Despite steadily increasing cell phone usage³² particularly with respect to wireless broadband services – price levels for all four national wireless carriers continue a steady downward trend:³³

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²⁹ Coalition OB at 16.

³⁰ Exhibit 16 at 78, Figure 2.

³¹ FCC, Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993, WT Docket No. 15-125, Eighteenth Annual Report and Analysis of Competitive Market Conditions With Respect to Mobile Wireless, Including Commercial Mobile Services, FCC DA 15-1487, Rel. Dec. 23, 2015, at para. 28.

³² Coalition OB at 4.

³³ FCC, Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993, WT Docket No. 15-125, Eighteenth Annual Report and Analysis of Competitive Market Conditions With Respect to Mobile Wireless, Including Commercial Mobile Services, FCC DA 15-1487, Rel. Dec. 23, 2015, at para. 28.

Table II.D.1
ARPU Estimates of Publicly Traded Facilities-Based Mobile Wireless Service Providers
4th Quarter 2012 – 2nd Quarter 2015

Nationwide Providers	4Q12	4Q13	4Q14	2Q15
AT&T	\$ 46.94	\$ 47.58	\$ 42.04	\$41.07
Verizon Wireless	\$ 47.57	\$ 47.50	\$ 45.52	\$43.38
Sprint	\$ 43.37	\$ 44.83	\$ 40.44	\$38.03
T-Mobile	\$ 40.24	\$ 36.91	\$ 35.56	\$34.77

This FCC table shows that between the fourth quarter of 2012 and the second quarter of 2015, all four nationwide service providers experienced a decline in ARPU. AT&T’s ARPU declined by approximately 13%, Verizon Wireless’s ARPU declined by approximately 9%, Sprint’s ARPU declined by approximately 12%, and T-Mobile’s ARPU declined by approximately 14%.

In terms of ARPU, the drop in wireless prices over the past decade is even greater when the significant expansion in the scope of wireless service that has emerged over the past decade is considered. In 2006, wireless phones were used to place and receive *voice* telephone calls subject to specific “block of time” limits. Today, wireless service includes limited broadband Internet access, and in most cases unlimited voice and unlimited texting. Yet even with these additional features and functionalities, ARPU has still been decreasing. Wireline rates, on the other hand, have been steadily rising, and without any significant expansion or change in the set of functionalities and features being offered by wireline carriers.³⁴

If wireline and wireless were viewed by the majority of consumers as the close substitutes the carriers claim them to be, the wireline service providers would not be able to impose substantially higher wireline rates or sustain those higher rates over an extended period of time, nor would they have been able to maintain the anachronistically small local calling areas and lack of calling features typical of basic local wireline service. Wireless offerings, on the other hand, provide nationwide calling and a large array of calling features, at no additional charge.

³⁴ Exhibit 16 at para. 25.

The carriers instead focus on the large percentage of households that have discontinued wireline service altogether and now are “wireless-only.” They ascribe no importance to the fact that more than half of all California households still retain wireline service even though most also have one or more wireless phones, which is compelling evidence many consumers *do not* view wireless as a substitute for wireline telephone service. Dr. Katz, Dr. Aron, Dr. Topper, and Mr. Gillan all argue that wireline and wireless services are sufficiently substitutable so that wireless price levels operate as an upper boundary on the prices that incumbent landline carriers can charge for landline services.³⁵

The carriers point to Dr. Aron’s June 1, 2016 testimony that cited what she described as three (3) “empirical” studies purporting to provide estimates of the cross-price elasticity of wireline and wireless services.³⁶ During her testimony at the July 20 hearing, Dr. Aron claimed that all three of the cited studies “find a positive cross price elasticity in both directions, as I recall, between wireline and wireless” which, according to Dr. Aron, indicates that wireline and wireless services are economic substitutes for one another.³⁷

According to Dr. Aron, “in the most recent study using the most recent data is that that's quite a significant cross price elasticity in magnitude. I think it was something like 1.25, which is – among economists, that would be a significant magnitude.”³⁸ Notably, the “most recent study” that Dr. Aron referred to was authored by her colleague at Navigant, Kevin Caves, and was published in 2011.³⁹ The Caves study relied upon nationwide “empirical data” covering the period 2001-2007⁴⁰ – i.e., a period that ended

³⁵ Katz (AT&T), June 1, 2016, at 9-10; Aron (AT&T), June 1, 2016, at 31, (A.22). Topper (Charter Fiberlink et al), June 1, 2016, at 5-7, (A.7). Gillan (Cox), June 1, 2016, at 10.

³⁶ Coalition Opening Brief, at 16-17.

³⁷ Reporters Transcript (RT) of Evidentiary Hearing, page 83:26-84:3.

³⁸ RT 84:25-85:3.

³⁹ See AT&T Testimony of Debra Aron, Exhibit 5 at Fn. 53, citing to: Caves, Kevin, “Quantifying Price-Driven Wireless Substitution in Telephony,” *Telecommunications Policy*, 35 (2011), at 984-998.

⁴⁰ *Id.*, at 989.

before the implementation of the URF had begun. But even back then, the persistent upward trend in wireline prices versus the ongoing drop in wireless prices was clearly occurring. The study's author notes that "[f]rom 2001–2007, the price of wireless service dropped by approximately 12.9%. Meanwhile, although the price of wireline service remained significantly below the price of wireless, it is also the case that average wireline rates increased by approximately 13.3% during this timeframe."⁴¹ Besides being based upon national, rather than California price and demand data,⁴² the "empirical data" studied by the author was, by his own admission, one in which "the price of wireline service remained significantly below the price of wireless," a relationship that certainly no longer prevails. But even if one were to accept the Caves study as relevant here, both Dr. Aron and the author have misstated and mischaracterized what the study actually demonstrates.

The Caves study provides the results of six (6) different econometric models that calculate the cross-elasticity of demand for *wireless* as a function of the price of *wireline* service.⁴³ Two of Caves' models actually produce *negative* values for this cross-elasticity, while a third produces a near-zero value (+0.010), indicating a distinct absence of substitutability. The other three models produce positive cross-elasticities, but with values of +0.687, +0.687, and +0.475.⁴⁴ Caves also constructed two additional models of

⁴¹ *Id.*, at 987.

⁴² The two other studies cited by Dr. Aron also relied upon national, rather than California-specific, data, and also involved time periods that pre-dated the post-URF period. Ward and Woroch's 2010 paper attempts to find a cross-price elasticity by analyzing the relationship between wireline service "lifeline" subsidies across multiple states to the demand for wireless subscriptions *using quarterly data between 3Q1999 and 4Q2001*. Ward, Michael and Glenn Woroch, "The Effect of Prices of Fixed and Mobile Telephone Penetration: Using Price Subsidies as Natural Experiments," *Information Economics and Policy* 22(2010). The Mayo, Macher study relies upon a slightly more recent data set (2003- 2010), but its price series is less accurate, especially for wireline prices, because only basic local flat-rate plans are included; long distance and optional services charges, such as for call waiting, caller ID and voice mail, are ignored. Jeffrey Macher et al., "Demand in a Portfolio-Choice Environment: The Evolution of Telecommunications", Georgetown McDonough School of Business Research Paper No. 2012-19, August 20, 2012, available at SSRN:<http://ssrn.com/abstract=2133424>. Note also that the cross-price elasticities estimated by both of these two other studies were far lower than the result reported by Caves.

⁴³ Caves at 992-994.

⁴⁴ *Ibid.*

the demand for *wireline* as a function of the price of *wireless*.⁴⁵ The results cited by Dr. Aron – +1.125 – was one of these (the other model produced a slightly higher result of +1.324). Thus the “empirical results” reported by Caves actually supported a conclusion that wireline and wireless services are *not* substitutes. Dr. Aron’s choice of one of the two models that happened to be supportive of her “substitutability” contention is, at the least, questionable.

The model that was referred to by Dr. Aron as producing a cross-elasticity of +1.25 also calculated separate “own-price elasticities” for *wireline* service at –0.575 and for *wireless* at –1.756.⁴⁶ Where a “cross-price elasticity” measures the effect of a change in the price of one product (Product A) on the demand for another product (Product B), “own-price elasticity” is a measure of the effect of a price change on the demand *for that product* – i.e., the effect of a change in the price of Product A on the demand for Product A.⁴⁷ Own-price elasticities typically have a negative sign, reflecting the fact that in most cases price and demand move in opposite directions – i.e., an increase in the price of any product will typically result in a decrease in the demand for that product. Own-price elasticities whose absolute value (ignoring the sign) is less than 1.0 indicate relatively *inelastic* demand; conversely, own-price elasticities whose absolute value is greater than 1.0 indicate relatively *elastic* demand.⁴⁸

The highly *inelastic* demand (as measured by own-price elasticity) that the Caves model ascribes to wireline service provides the most compelling evidence in this case that **wireline prices are not being constrained to competitive levels by the lower prices of wireless service**. Indeed, if a wireline carrier were to increase its price level by 10%, the demand for its service would decrease by only 5.75%, *thus making that 10% price*

⁴⁵ *Id.* at 994.

⁴⁶ *Ibid.*

⁴⁷ See, e.g., Nicholson, Walter and Christopher Snyder, *Microeconomic Theory Basic Principles and Extensions*, 10th Ed., Thompson-Southwestern, 2008, at pp. 159-160.

⁴⁸ See, e.g., Case, Carl E., Fair, Ray C., and Sharon M. Oster, *Principles of Microeconomics* (9th ed.), Prentice Hall, 2009, at 92.

increase profitable. Conversely, if the own-price elasticity was relatively *elastic* – as is the case for wireless service, which Caves estimated at -1.756 , a 10% price increase would produce a 17.56% drop in demand, making that price change unprofitable.

The *Horizontal Merger Guidelines* specifies a so-called “hypothetical monopolist test” which focuses specifically upon a product’s own-price elasticity, not on the cross-price elasticity associated with putative substitutes:

The hypothetical monopolist test requires that a product market contain enough substitute products so that it could be subject to post-merger exercise of market power significantly exceeding that existing absent the merger. Specifically, the test requires that a hypothetical profit-maximizing firm, not subject to price regulation, that was the only present and future seller of those products (“hypothetical monopolist”) likely would impose at least a small but significant and non-transitory increase in price (“SSNIP”) on at least one product in the market, including at least one product sold by one of the merging firms.⁴⁹

With an own-price elasticity of only -0.575 , wireline carriers fully satisfy the hypothetical monopolist test because, as profit-maximizing non-price-regulated firms, they could and likely would impose at least a small but significant and non-transitory increase in price (SSNIP) on wireline service, since doing so would increase their profits overall. And the succession of wireline price increases that have occurred in California since wireline rates were deregulated affirms that wireline carriers could, would, and have succeeded in effecting such “small but significant and non-transitory increases in price” on multiple occasions since the adoption of URF. On the other hand, with an own-price elasticity of -1.756 , a “small but significant and non-transitory increase in price” of *wireless* service would be unprofitable, because the wireless carrier’s loss of business would easily exceed the additional per-unit revenue associated with the price increase.

The Caves’ study’s identification of the large difference between wireline and wireless own price elasticities (-0.575 vs. -1.756) is also consistent with Dr. Roycroft’s conclusion “that substitution between [wireline and wireless] services is not symmetric.”

⁴⁹ United States Department of Justice and Federal Trade Commission, *Horizontal Merger Guidelines*,
(continued on next page)

As pointed out by TURN, substitution is *asymmetric*.⁵⁰ Wireless service competes with wireline in that a wireless phone can be used at the customer's residence (assuming adequate signal quality). However, even that explanation may be overly simplistic. As TURN notes, "substitution of mobility services for wireline services, while more likely, is not uniform. Limitations of the technology impacting signal strength, back up power, and emergency services, may discourage consumers from switching between wireline and wireless services. Likewise, some consumers may rely on complementary technologies associated with a wireline telephone, such as fax machines, alarm systems, or medical monitoring devices that may make it difficult or more costly to substitute with wireless."⁵¹ Mr. Gillan (Cox) also readily concedes that "[t]here are some devices in the home that may require a wireline connection – medical monitoring equipment and fax machines are two such examples – *and this means that not every household is a candidate for wireless-only service.*"⁵² Finally, the Caves study's finding of highly inelastic demand for wireline service is consistent with the experience reported by Mr. Schultz (Consolidated), who reported that the demand for his company's wireline service was not significantly affected by its recent \$2.00 price increase.⁵³

Another way in which wireless cannot serve as an adequate substitute for wireline service is with respect to access to E911 emergency services. The FCC has for nearly a decade been addressing the problem of inaccurate location identification for emergency (E911) calls placed from wireless phones from inside buildings.⁵⁴ In February 2015, the

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2010 edition, at §4.1.1.

⁵⁰ TURN Opening Brief at 10, citing Exhibit 54 (Roycroft June 1) at 32.

⁵¹ *Id.*, at 13.

⁵² Gillan (Exhibit 28) at 11, emphasis added.

⁵³ RT 127:5-13.

⁵⁴ *Wireless E911 Location Accuracy Requirements; Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems; 911 Requirements for IP-Enabled Service Providers*, PS Docket No. 07-114, CC Docket No. 94-102, WC Docket No. 05-196, First Report and Order, 22 FCC Rcd 20105, 20108 ¶8 (First Report and Order), FCC 07-166, Adopted: September 11, 2007; Rel.: November 20, 2007.

FCC issued an Order adopting specific “Indoor Location Accuracy Requirements” for wireless handsets.⁵⁵ In its Press Release announcing the issuance of that ruling, the FCC notes that “[t]hese updates to the Commission’s Enhanced 911 (E911) rules respond to Americans’ increasing use of wireless phones to call 911, *especially from indoors, where traditional 911 location technologies often do not work effectively or at all.*”⁵⁶ The four nationwide CMRS carriers (AT&T, Verizon, Sprint and T-Mobile) are being required to provide “(1) dispatchable [horizontal] location, or (2) x/y location within 50 meters, for the following percentages of wireless 911 calls -- (1) Within 2 years: 40% of all wireless 911 calls; (2) Within 3 years: 50% of all wireless 911 calls; (3) Within 5 years: 70% of all wireless 911 calls; and (4) Within 6 years: 80% of all wireless 911 calls.”⁵⁷ The requirement is far less specific with respect to *vertical* location accuracy. Even when these new requirements are ultimately satisfied, there will still be no assurance that a call to E911 placed via a wireless phone from inside a building – and particularly from within a multi-story, multi-unit residential building – will provide accurate location information to the First Responder. In contrast, an E911 call placed from a wireline phone provides precise location information, including the specific apartment number in a multi-unit building. Consumers who place importance on reliable access to emergency response services when needed will not view a wireless phone as equivalent to or substitutable for wireline.

With regards to defining two separate markets consisting of 1) wireless-only households, and 2) households with wireline, the carriers claim that “[i]t would be extremely difficult and impractical, if not impossible, for carriers to identify and separately price voice service to wireline users who are reluctant to switch to wireless or

⁵⁵ FCC, *I/M/O Wireless E911 Location Accuracy Requirements*, PS Docket No. 07-114, *Fourth Report and Order*, FCC 15-9, Adopted: January 29, 2015 Released: February 3, 2015.

⁵⁶ “FCC ADOPTS RULES TO HELP EMERGENCY RESPONDERS BETTER LOCATE WIRELESS 911 CALLERS,” FCC Press Release, January 29, 2015, emphasis supplied.

⁵⁷ *Id.*, Appendix D, p. 103.

other competitive alternatives for voice service.”⁵⁸ This claim is not supported by economic theory nor is it accurate. In fact, Dr. Selwyn provided a detailed explanation as to exactly how this can be and is being accomplished, and cited a specific example, discussed in sworn testimony before this Commission by an AT&T/SBC expert witness in the 2005 AT&T/SBC merger proceeding, where legacy AT&T had adopted precisely this type of pricing strategy to “harvest” its existing CLEC customer base by a succession of price increases.⁵⁹ Consumers “who are reluctant to switch to wireless or other competitive alternatives for voice service” are easily identified as a specific market segment by virtue of their decision to *retain* their wireline service. This *self-segmentation* makes it easy – certainly not “impractical, if not impossible” – “for carriers to identify and separately price voice service to wireline users who are reluctant to switch to wireless or other competitive alternatives for voice service.”⁶⁰ And other than citations to their own economic experts, the carriers fail to cite to a single independent economic text or other authority for their false contention.

Another way in which similar self-segmentation occurs is where wireline voice services are being offered both on a stand-alone basis and as a part of “bundles” that include broadband and/or video services. The carriers concede that “bundles that include other voice services and/or Internet or video services ... typically offer a ... discount from the a la carte prices.”⁶¹ The carriers also concede that “[i]n fact, the majority of consumers today obtain their voice service through a bundle.”⁶² Conversely, if “bundles” are being offered at a “discount” relative to individual *a la carte* service prices, then those stand-alone services are, in effect, being offered at a *premium price* to the “minority” of customers who do not subscribe to bundles of voice and other services. In fact, the carriers’ adoption of bundled pricing directly belies their contentions

⁵⁸ Coalition OB at 25.

⁵⁹ Exhibit 21 at para. 23.

⁶⁰ Coalition OB at 25.

⁶¹ Coalition OB at 17.

⁶² *Id.*

regarding the “impossibility” for “carriers to identify and separately price voice services” to customers exhibiting the least price-elastic demand.

As several carriers’ witnesses have suggested, *some* consumers find wireline and wireless to be sufficiently close substitutes that they are willing to discontinue wireline service altogether. But what the carriers’ economists completely ignore is that the more than half of California households, by their decision to *retain* their wireline service, have revealed the importance they ascribe to wireline service. These two separate groups – i.e., those who have “cut” the wireline “cord” and those who have not – have, in essence, divided themselves into two distinct market segments each of which presents wireline service providers with dramatically different demand attributes. Those who have elected to retain wireline service even while also purchasing wireless service have demonstrated that, for them, wireline service is relatively price-inelastic – the same conclusion that Caves had reached based upon the empirical econometric analysis cited by Dr. Aron.

The persistent *increases* in wireline prices and the persistent *decreases* in wireless prices are consistent with the Caves study’s findings of highly inelastic demand for wireline service and highly elastic demand for wireless. The only correct conclusions that can be drawn from the Caves study are 1) that wireline and wireless services are in separate and distinct product markets, 2) that the demand for wireline service is price-inelastic and thus susceptible to a succession of price increases, 3) that the demand for wireless service is price-elastic and that the succession of wireless price drops is consistent with that attribute and, most importantly, 4) that **wireless prices place no operative constraint on wireline prices or price levels.**

It is not possible that two purportedly substitute products – wireline and wireless telephone services – could exhibit such dramatically different own-price elasticities. Differences in own-price elasticities are fully consistent with Dr. Roycroft’s assessment of wireline/wireless substitutability as highly asymmetric. Thus, as stated above the only correct conclusion that can be drawn from the Caves study is that wireline and wireless services are in separate and distinct product markets and, most importantly, that wireless prices place no operative constraint on wireline prices or price levels.

ORA's conclusion is also buttressed by the Center for Accessible Technology and TURN, who state in their opening briefs that wireless service is a complement to wireline service when it comes to serving the community comprised of people with disabilities.⁶³ Many of the wireline services cannot be replicated by wireless service for people with disabilities, and would therefore not be an effective substitute. For example, multiple customers describe difficulty in using wireless handsets, the superior audio quality of wireline service, the incompatibility of TTY devices with wireless service, and other factors that make wireless service not only impractical but also dangerous.⁶⁴

Finally, the Coalition's OB does not address the broadband market. ORA's analysis demonstrates that when assessing competition in the broadband market, the Commission should not include wireless mobile services and technologies due to a lack of substitutability.⁶⁵ Instead, as described in ORA's OB, the Commission should assess competition in the broadband market to include only landline broadband services and technologies.⁶⁶

2. The Impact of Bundles on Market Definition

The carriers state that "many consumers obtain their voice service as part of bundles that include other voice services and/or Internet or video services" and that "bundles are part of the competitive market" for telecommunications.⁶⁷ However, as pointed out in ORA's OB, while bundles do play an important role in defining the market they do so primarily because they limit competition.⁶⁸ Bundles play a substantial role in limiting the telecommunications market to facilities based services due to the ability of facilities based bundled service providers to manage and limit competition from carriers who only provide non-bundled voice, video or broadband.

⁶³ CforAT OB at 6; TURN OB at 13.

⁶⁴ Coalition OB at 6.

⁶⁵ See, Exhibit 17.

⁶⁶ ORA OB at 22-33; See Exhibit 16; See also, Exhibit 17; See also, Exhibit 18.

⁶⁷ *Id.* at 17.

⁶⁸ See ORA OB at 33.

The carriers assert that “[b]ecause they include voice services, there is no doubt that bundles are part of the competitive market for voice service.”⁶⁹ But they also assert that the non-voice components of double- and triple-play “bundles” – i.e., broadband and video – are outside of the Commission’s jurisdiction, and that “any attempt by the Commission to regulate or exercise jurisdiction over broadband or VoIP services or wireless rates would be unlawful.”⁷⁰ The carriers attempt to have it both ways – to include bundles when it is beneficial, but to exclude them when it is not. Clearly, if the Commission is to consider the carriers’ argument that bundles are part of the competitive market for telecommunications services, the Commission must also use its jurisdiction to gather data and make findings with regards to the service in the bundles.

The carriers provide service over a common facilities network infrastructure, utilize common organizational resources, and enjoy substantial economies of scope and scale that stem directly from their involvement in multiple related industry sectors as well as their “first mover” incumbency advantages.⁷¹ Thus, the need for the Commission to address broadband service within a bundle would exist even if its jurisdiction were entirely confined to voice services, which it is not.⁷² Even though wireline voice telephone service rates have been deregulated for some time, Section 216 and Section 451 continue to empower the Commission with jurisdiction over prices for voice telephone services and also requires that such prices be “just and reasonable.” The Commission thus retains the regulatory authority to examine – and potentially to regulate – voice telephone rates with respect to the underlying cost of providing voice telephone services. However, because ILECs subject to the Commission’s jurisdiction use the same assets and organizational resources to provide voice, broadband and video on a fully integrated basis, the Commission cannot make the required determination without first allocating the joint costs of these services as between regulated voice and the other

⁶⁹ Coalition OB at 17.

⁷⁰ *Id.*, at 9.

⁷¹ Exhibit 15 at para. 26.

nonregulated services. This is not a “new” issue nor is it one that has arisen uniquely as a result of the ILECs’ entry into the broadband and video markets. The Commission has over many years been required to address the joint provision of regulated and nonregulated services by public utilities under its jurisdiction.

Among other things, the Commission should ensure that regulated services are not being used as a means to cross-subsidize non-regulated and potentially competing services. Over-allocating costs of joint plant to regulated services accomplishes such cross-subsidization. Plant construction that has been driven primarily or even exclusively by the regulated utility’s need to support nonregulated services while also being used, post-hoc, to support legacy regulated services presents a special type of challenge and requires that the Commission examine all such undertakings irrespective of the regulatory status of the services involved.

Similarly, the pervasive use of bundles of voice, broadband and video affords the ILECs and cable companies a distinct competitive advantage that is denied to smaller and more specialized rivals. Respondent carriers readily admit that “[c]onsumers have a strong desire for bundled options, which typically offer a combination of services and features at a discount from the a la carte prices, along with the convenience of one-stop shopping and billing.”⁷² ORA has demonstrated that the majority of California households have only one available provider of broadband at the 25/3 level, and the overwhelming majority have a choice between no more than two such providers. By bundling voice services with noncompetitive broadband and, through the bundle discount, offering voice at a lower incremental price than would be available when purchased on a stand-alone basis, the ILECs and cable companies can effectively undercut voice offerings of competitors that cannot offer discounted multi-service bundles. For example, a customer who purchases broadband from an ILEC or cable company is less likely to purchase a stand-alone over-the-top VoIP service if she can add

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⁷² *Ibid.*

the ILEC/cable voice to the bundle at a deeply discounted incremental price. Moreover, such discounting can also be – and is being – used by the incumbent LEC and cable companies to migrate customers of stand-alone basic voice telephone service to these high-revenue bundles, thereby making those customers less available to rival voice providers while shifting voice revenues away from regulated wireline services and over to nonregulated VoIP.

3. The Market Does Not Include OTT Services and CLECs

The carriers again refer back to the 10 year old URF decision, rather than addressing the extensive record that was produced, developed, and analyzed in this proceeding, when they state that URF defined the California telecommunications market very broadly to include OTT services and CLECs.⁷⁴

ORA's analysis finds that CLECs that rely on capacity leased from facilities based providers, particularly where the lessor is itself a competitor in the same geographic and product market, offer no additional source of competition beyond that offered by the facilities based upstream provider. ORA's finding is supported by the FCC, which stated, "[W]e do not consider competition over resold lines as a material competitive restraint on any facility-based supplier with market power."⁷⁵ OTT VoIP also exhibits the same competitive issues found by the CLECs and, therefore, should not be considered a valid competitor in the California telecommunications voice market due to the fact that OTT is governed by the availability and pricing of the underlying broadband provider.

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⁷³ Coalition OB at 17.

⁷⁴ Coalition OB at 18-20.

⁷⁵ *Business Data Services Order*, FCC 16-54, April 28, 2016 at ¶ 230.

4. The Carriers Are Incorrect In Limiting The Analysis of Broadband When Defining the Market

The carriers assert that broadband is only relevant insofar as it functions as an underlying transmission technology for OTT VoIP services.⁷⁶ ORA disagrees. The carriers also attempt to argue that the Commission lacks jurisdiction to discuss the broadband market, which is addressed above.

The FCC defined broadband as a telecommunications service.⁷⁷ This Investigation's stated purpose is to examine "whether competition is delivering the dependable, high-quality *telecommunications services* that are vital to California's people and economy."⁷⁸ In performing this examination, the Commission should assess competition in the broadband market apart from competition in the voice market.

Broadband and voice are both telecommunications services, and integral parts of the greater telecommunications market. However, broadband and voice services comprise two distinct submarkets within the greater telecommunications market. Broadband is a rapidly evolving telecommunications service, and comes in many flavors that include different speeds, latencies, and technologies. The Commission's stated intention is to examine "dependable," "high quality," and "vital" telecommunications services in this proceeding.⁷⁹ The Commission should therefore consider the examination of competition in the broadband market for landline broadband services with speeds of at least 25/3 Mbps.

The actions of providers, as well as consumer purchasing patterns, demonstrate that the relevant broadband market is for wireline service with speeds of at least 25/3 Mbps.⁸⁰ For example, over 84% of the residential broadband customers in California

⁷⁶ Coalition OB at 21, 22, 28, 37.

⁷⁷ See, 2015 FCC Broadband Progress Report, FCC 15-10, Released February 4, 2015 at 3, available at https://apps.fcc.gov/edocs_public/attachmatch/FCC-15-10A1.pdf; See also, 2016 FCC Broadband Progress Report, FCC 16-6, Released January 29, 2016 at 12.

⁷⁸ OII at 1 (emphasis added).

⁷⁹ OII at 1.

⁸⁰ Exhibit 17, Direct Testimony of ORA witness Adam Clark, served on June 1, 2016 at II-2, ii-4.

who are served by AT&T, Charter, Comcast, Cox, Surewest, Frontier or Time Warner Cable purchase service with download speeds equal to or greater than 25 Mbps, and 81% purchase service with download speeds equal to or greater than 50 Mbps.⁸¹

It should be noted that the Writers Guild of America West (WGAW) supports ORA's assessment of the broadband market. WGAW agrees that the relevant broadband speed threshold should be 25 Mbps upload and 3 Mbps download when measuring the California telecommunications market.⁸² WGAW supports the Commission's analysis of broadband in assessing California's telecommunication market given that streaming video and audio comprise 70% of peak downstream traffic over the telecommunications network, consumer demand for high speed broadband has led to cable overtaking the ILECs as the dominant broadband provider in California and around the nation, and the loss of revenue from traditional television services provides cable companies an incentive to increase broadband prices.⁸³

As discussed above, the OII and the Scoping Memo placed these issues in this proceeding, and there is no federal or state policy that prohibits the Commission from gathering data – in fact, the Commission is obligated to consider issues such as price, quality, and availability for broadband. Therefore, the relevant analysis of California's telecommunications market should include broadband at and above speeds of 25 Mbps download and 3 Mbps upload.

⁸¹ *Id.* at II-3, II-4.

⁸² WGAW OB at 7.

⁸³ *Id.* at 3-4.

B. Measuring the Market

1. The Carriers Overstate Consumer Options for Wireless Voice and Data

The carriers state that most households have several options for wireless voice and data.⁸⁴ This optimistic view of competition in California's wireless voice and data markets is belied by ORA's analysis.

ORA discussed above the substitutability of wireless and wireline voice, and does not repeat its discussion here.

Consumers' options are also limited in the broadband market where the Commission and the FCC have stated that wireless broadband and wireline broadband are not functional substitutes.⁸⁵ In fact, mobile data service is a complement to, rather than a substitute for, wireline broadband service.⁸⁶ ORA's analysis demonstrates how consumers' behavior and purchasing patterns contradict the carriers' notions that both these services are functional equivalents for three main reasons:

- 1) Dissimilar yet overlapping capabilities between wireline broadband and wireless data services due to differences in service availability, speeds, and functional capabilities.⁸⁷
- 2) The manner in which mobile data and wireline broadband services are sold to and used by consumers, such as the imposition of data caps.⁸⁸
- 3) Consumers with financial means tend to purchase both mobile data service subscriptions and wireline broadband subscriptions.⁸⁹

⁸⁴ Coalition OB at 27.

⁸⁵ Comments of the California Public Utilities Commission, *In the Matter of In Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion, and Possible Steps to Accelerate Such Deployment Pursuant to Section 706 of the Telecommunications Act of 1996, as Amended by the Broadband Data Improvement Act*, GN Docket No. 15-191, filed on September 15, 2015 (Commission September 2015 Comments) at 3; 2016 FCC Broadband Progress Report, FCC 16-6, Released January 29, 2016 at 12.

⁸⁶ See Exhibit 17, Direct Testimony of ORA witness Adam Clark, served on June 1, 2016.

⁸⁷ *Id.* at II-3.

⁸⁸ *Id.* at II-11.

⁸⁹ *Id.* at II-16.

In addition, as presented by the testimony of ORA's expert witness Tony Tully, there are limitations to fixed wireless broadband that make it unsuitable for consideration as a substitute to fixed wireline broadband.²⁰ ORA's analysis finds that fixed wireless broadband's limited availability, technological limitations, low speeds, and higher prices means fixed wireless broadband cannot be considered a substitute to fixed wireline broadband for purposes of a market analysis.²¹

The extensive data obtained and reviewed by ORA demonstrates that the broadband market at speeds of 25/3 is not an effectively competitive market. Consumer choice for broadband services at these speeds in California is severely limited. For example, 70% of households in California have access to only one provider, 24% have access to no more than two providers, and 6% of households have no broadband option at all.²²

Therefore, when it comes to broadband, California consumers have far more limited options than the alleged choices touted by the carriers.

2. The Carriers Incorrectly Interpret The Relationship Between POTS Lines and Mobile and VoIP

The carriers claim the California telecommunications market is competitive because "the number of wireline subscribers with switched access lines has decreased dramatically (and continues to decrease) while wireless and VoIP subscribers have increased (and continue to increase)."²³ However, the drop in switched access lines does not confirm that carriers do not lack market power. Data analyzed by ORA in its OB and testimonies shows that carriers have market power sufficient to drive pricing at their discretion. An increase in wireless subscriptions and decrease in wireline subscriptions

²⁰ See Exhibit 18.

²¹ See Exhibit 18, Attachments B and C; Exhibit 18 at II-3.

²² Exhibit 16, Table 8 at 46.

²³ Coalition OB at 30-31.

does not mean that wireless is putting any pricing constraint on wireline, as discussed more thoroughly below.

3. The Carriers Err In Their Interpretation of Reliance on Market Share Measures

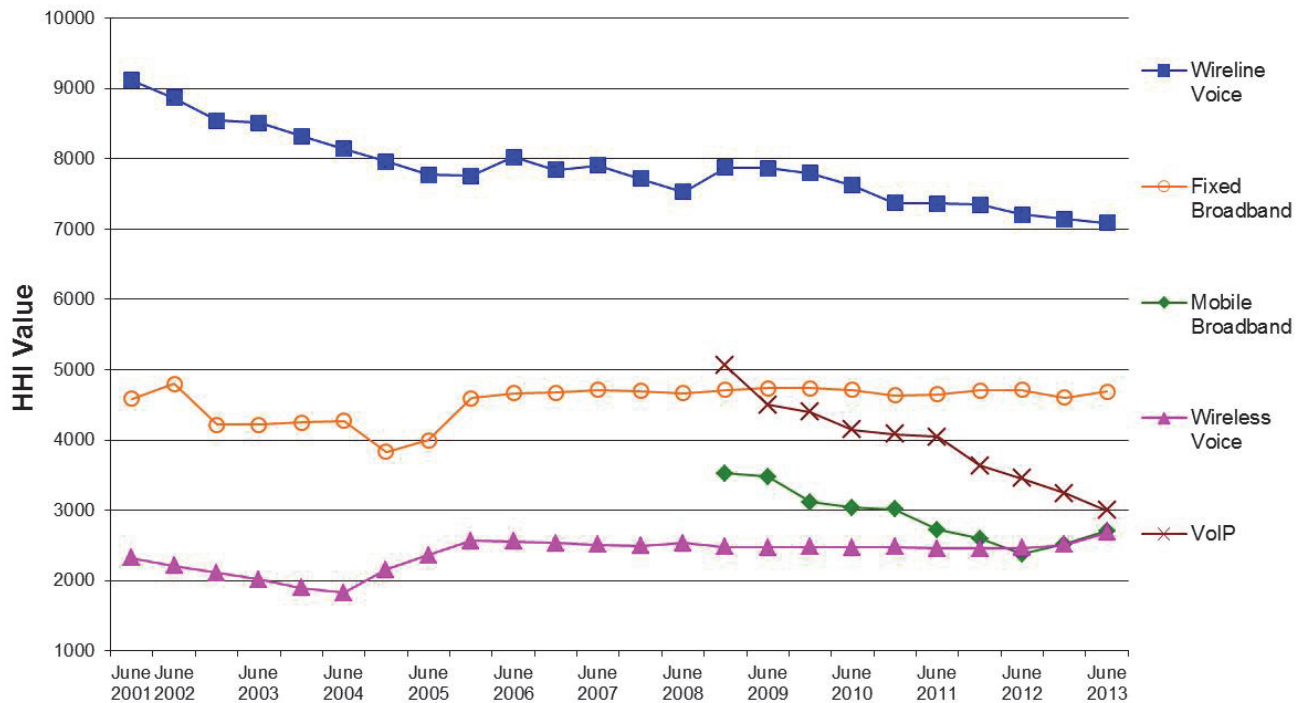
The carriers caution “against an overreliance on market-share measures” but at the same time point to data from the 2015 CD report that found intermodal HHI was only “moderately concentrated” and declining since 2006.⁹⁴ However, the carriers have cherry-picked their reference to the CD report. In fact, the CD report does not show that HHI for the telecommunications market is decreasing. Chart 3 of the report, displayed below, shows that wireline voice as a separate market has an HHI of 7,000 which signifies a very highly concentrated market.⁹⁵ Generally, an HHI of 2500 or greater signifies a concentrated market.⁹⁶

⁹⁴ Coalition OB at 30, 35.

⁹⁵ Communications Division Market Share Analysis of Retail Communications Report, January 2015 at 12, which can be found at http://www.cpuc.ca.gov/uploadedFiles/CPUC_Public_Website/Content/Utilities_and_Industries/Communications_-_Telecommunications_and_Broadband/Reports_and_Presentations/MktShareFIPUC%20Reports%20on%20the%20Telecommunications%20Marketplace%20in%20California.pdf

⁹⁶ Exhibit 16, Executive Summary at viii.

HHI Market Concentration by Technology Adjusted for ILEC and Cable Service Territories



This chart undercuts the carriers’ claim that the CD report is evidence of a competitive market for wireline voice and broadband. As described in more detail in ORA’s opening brief and testimonies, which analyzes data at a more granular level to show market share data in both an HHI and MDI, the California telecommunications market is highly concentrated.

C. Analyzing the Market

1. What constitutes a competitive telecommunications market or markets?

The Coalition claims that there is “effective competition” because consumers “have access to multiple competing options from independent suppliers and some (but not necessarily all) consumers are able to switch among those options in response to a price increase.”²⁷ The Coalition claims that consumers in California have a “myriad” of

²⁷ Coalition OB at 33.

other choices for voice service, including other voice services such as “wireless, cable or OTT VoIP, or CLEC-provided service.”⁹⁸

However, as discussed above, wireless service is not a substitute in many respects for wireline service. More importantly, wireless prices are not constraining wireline prices. Thus, ORA correctly treats the wireline voice market as being exclusive of wireless and other different forms of communication, which cannot be included in any proper analysis of the voice market.

2. Metrics to determine competition

a) Deployment/availability -- how many choices do consumers in a given area have? Substitutability of different options?

The carriers again argue that “nearly all consumers throughout AT&T California’s service territory have multiple and varied options for voice service.”⁹⁹ However, as discussed above ORA has rebutted this view of the marketplace, where every conceivable form of telecommunication service is considered a competitor to wireline voice.

For example, in the Coalition’s OB they cite to Dr. Aron, who includes “pre-paid wireless service”, and in the Introduction the Coalition OB refers to email and texting.¹⁰⁰

However, the Coalition conflates the concept of “choice” with the far more technical concept of economic substitutability. They argue that “[s]ince 2006, new technologies have facilitated an even greater array of products and voice service offerings that give consumers a bevy of competing communications choices,” and claim that “[c]ommunications options that did not exist or were in their infancy at the time of the URF Decision are now ubiquitous, essential parts of everyday life.” Included among these “choices” are “[t]exting, email, social media, and numerous applications [that] have displaced much of what used to be wireline voice communication.”¹⁰¹

⁹⁸ *Ibid.*

⁹⁹ Coalition OB at 33.

¹⁰⁰ Coalition OB at 34, and Introduction.

¹⁰¹ Coalition OB at 2, citations omitted.

However, comparing texting/email/social media to wireline voice service does not make sense. For comparison, consumers have several “choices” of transportation. They can take busses, trains, or subways. They can ride a bike or a motorcycle. For short distances, they can walk. But there is no evidence that any of these “choices” place any downward pressure on the price of automobiles, although they may have some impact on automobile traffic on freeways and streets during rush hour. Using public transportation to commute to work does not negate one’s need to also own an automobile to meet transport needs where public transportation does not go. Thus, it is essential to evaluate the uses as well as the characteristics of the products being compared. The substitutability between two products for some purposes in no way indicates that they are substitutable for all purposes.

In the same sense, emails and text messages are certainly alternative means of two-way person-to-person communication, and have led to a decrease in the aggregate volume of voice minutes – both wireline *and* wireless. Between 2010 and 2014, nationwide interstate switched access (i.e., long distance) minutes of use decreased by about 41%, from about 240-billion to about 142-billion.¹⁰² Wireless voice minutes have also decreased. On a per-subscriber per-month basis, wireless voice minutes-of-usage (MOUs) decreased from 758 in 2009 to 671 in 2014, a drop of 11.5%.¹⁰³ But if email and text messaging are to be viewed as “economic substitutes” for voice telephone service, why not also include first class mail, overnight express delivery services, telegraph, bike messengers, and any other means of person-to-person communication? The operative question before the Commission is not whether there are “choices” other than wireline voice telephone calling for such two-way communication – there obviously

¹⁰² FCC Universal Service Monitoring Report, data through September 2015, Supplemental Material: Subscribership, Penetration, and Minutes of Use-- ILEC Interstate Switched Access Minutes of Use - by State.xlsx (available at <https://www.fcc.gov/general/federal-state-joint-board-monitoring-reports> (accessed 8/25/16)).

¹⁰³ FCC, *Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993*, WT Docket No. 15-125, *Eighteenth Annual Report and Analysis of Competitive Market Conditions With Respect to Mobile Wireless, Including Commercial Mobile Services*, FCC DA 15-1487, Rel. Dec. 23, (continued on next page)

are – but whether any of these “choices” actually place any downward pressure on the *price* of wireline voice telephone service. The Coalition OB does not address anything about the pricing constraints these other communication modes might have. ORA correctly did not address these other modes of communication because they play no part in a proper competition analysis.

In a similar way, the fact that consumers have a “choice” between wireline and wireless voice services does not necessarily translate into “substitutability” in the formal economic sense of the term, or in and of itself indicate that “competition” from wireless is constraining or otherwise placing any downward pressure on the price of wireline services. As discussed above, the specific price elasticity evidence cited by Dr. Aron actually indicates otherwise. Wireless prices have been steadily decreasing in the decade since URF, yet these persistent price drops have done nothing to prevent the equally persistent increases in wireline prices over that same time frame.

While wireless penetration rates of California households are close to 100%, *more than half continue to retain their wireline voice telephone service*. Those households continue to demand wireline service, demonstrating their relative insensitivity to the persistent wireline price increases, an attribute of this identifiable and separate market segment that the wireline carriers have been successfully exploiting. If there were any merit to the Coalition’s contention that wireless competition constrains or places any downward pressure on wireline price levels, wireline prices would have been following the downward trend evident in the wireless market. But just the opposite outcome has taken place.

In Dr. Aron’s testimony quoted by the Coalition,¹⁰⁴ she notes that “[w]ireless plans do not distinguish between local and long distance calling, and all of their plans include features such as caller ID, call forwarding, and voice mail” while “[w]ireline plans that provide local voice service only are offered by AT&T and by some cable

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2015., at para. 148, Chart VII.B.1, Average MOU per Subscriber per Month, 2009-2014.

¹⁰⁴ Exhibit 5; Coalition OB at 34.

companies ...” If wireless were actually putting any pressure on wireline prices, wireline carriers could not continue to offer such local-only and no-feature plans – some of which carry prices that are actually *higher* than some of the lowest-priced wireless plans identified by Dr. Aron, such as the “\$5 per month ... Pure Talk USA” plan to which she refers.¹⁰⁵

Simply put, the carriers attempt to conflate the issues. “Choice” is not the same as “economic substitutability,” and the kind of “choices” to which the Coalition and its experts refer are demonstrably not placing any downward pressure or other pricing constraints on the ability of wireless carriers to maintain and to increase the considerably higher prices being charged to those California households that do not consider their wireless phone(s) as being capable of replacing the functionality they require and can only obtain from wireline voice telephone service.

b) Market concentration – HHI, CR2/CR4, other?

As discussed above, the Coalition OB does not address the market concentration analysis set forth by ORA in its OB and testimony, on the theory that the broadband market should not be considered in this proceeding.¹⁰⁶

In addition, the carriers continue to use antiquated URF findings, despite the existence of updated data in this proceeding and despite the Commission’s decision that URF’s underpinnings were inadequate.¹⁰⁷

The carriers cite to a 2015 CD Report, discussed above, for the proposition that market concentration is declining.¹⁰⁸ As discussed above, the Coalition makes no reference to Chart 3 of the CD Report that provides an HHI market concentration by

¹⁰⁵ A check of the Pure Talk USA website indicates that the lowest-priced plan the company offers is \$10, not the \$5 as testified to by Dr. Aron. <https://www.puretalkusa.com/> (accessed 8/25/16).

¹⁰⁶ Coalition OB at 34.

¹⁰⁷ *Ibid.*

¹⁰⁸ Coalition OB at 35.

technology.¹⁰⁹ This chart shows different types of voice technologies and broadband all having an HHI above 2,500 points; which indicates highly concentrated levels. Specifically, it shows wireline voice having the highest concentration levels, at 7,086. In effect, the CD report actually proves that the market is overly concentrated.

3. Special considerations for wholesale markets

The carriers claim that since the retail market is “fiercely competitive,” there is no need for a special analysis of wholesale markets.”¹¹⁰ ORA’s testimony and OB did not focus on wholesale markets.

4. Market performance and development over time

a) Have speeds increased?

Again, the carriers argue that broadband is not relevant to this proceeding, which ORA disputes.¹¹¹ Thus, the Coalition OB contains no discussion or analysis of broadband speeds. ORA discussed broadband speeds at length throughout its OB and this Reply Brief; but see especially ORA’s OB at page 32.

b) Has service quality improved?

The carriers also argue that service quality is not within the scope of this proceeding.¹¹² The carriers claim that because the metrics and standards for service quality are being considered in a different proceeding, the entire topic of service quality is irrelevant. However, service quality is a fundamental element of any legitimate competition analysis.¹¹³ Service quality considerations are necessary to conduct the analysis the Commission has undertaken in this OII.

¹⁰⁹ 2015 CD report at 11.

¹¹⁰ Coalition OB at 36.

¹¹¹ Coalition OB at 37.

¹¹² Coalition OB at 37.

¹¹³ As noted by Dr. Selwyn, “The quantity of customer complaints, the incidence of service outages, the average time to repair, the responsiveness of customer service representatives in addressing customer service problems, all provide useful indicia of the relative level of effective competition for voice, VoIP, wireless and broadband”. (Exhibit 15, March 15, 2016, Direct Testimony of Lee Selwyn, at 81.)

In addition, the OII placed service quality at issue. The OII notes that the Commission's prior decisions have sought to "foster an effectively competitive marketplace, one that would create good outcomes for consumers in terms of price, choice, coverage, quality and reliability."¹¹⁴ Service quality is referred to repeatedly in the URF I decision, which this OII seeks to update. Also, the OII's IR #20 asks that the parties identify the "metrics and sources of data" they believe would be useful to measure competition. ORA's testimony properly listed service quality as a metric, and provides an analysis of it in terms of competition. This focus is reflected in the Issues Outline provided with the July 1, 2016 Scoping Memo, which specifically names "Has service quality improved?" as an issue.

The service quality proceeding that the carriers refer to is considering new service quality standards. Here, ORA's testimony merely refers to data regarding service quality as a way to measure the effectiveness of competition, without proposing any service quality rules. The Coalition does not demonstrate how there is any danger of duplicating or overlapping efforts between these two different proceedings. Service quality data is being used for entirely different purposes in the different proceedings.

c) Is the market innovating?

The carriers argue that the telecommunications market is experiencing innovation.¹¹⁵ The carriers point to Skype and FaceTime, which are forms of VoIP service, and require a broadband connection. However, ORA does not dispute that VoIP is a competitor to traditional landline voice service.¹¹⁶

It is important to note that no carrier to this proceeding has described any innovations in traditional landline service. Instead, they point to innovations such as the

¹¹⁴ OII at 1.

¹¹⁵ Coalition OB at 38.

¹¹⁶ See pages 42 *et seq.* of ORA's OB.

smartphone, which is clearly a different product.¹¹⁷ Innovation in traditional landline service has been stagnant.

d) New market entrants & technologies

(1) Barriers to entry?

The carriers argue that competitors have entered the voice market and are “winning voice lines away from the ILECs.”¹¹⁸ However, the carriers cannot cite to a single new wireline voice competitor, because there are none. Competition for wireline voice continues to be a duopoly between the ILECs and the cable companies, resulting in a highly concentrated market. The evidence for this is high prices and low service quality, discussed at length in ORA’s OB.

Finally, the carriers concede that “traditional capital-intensive prerequisites to facilities-based services may continue to exist, such as the costs of installing fiber or cable.”¹¹⁹ They claim that this is “expected and unremarkable.”¹²⁰ Essentially, the carriers concede that it remains too expensive and difficult for new companies to enter the marketplace – in other words, there are severe barriers to entry. One need only look at the experience of Google to understand that those barriers continue to exist.¹²¹

D. Has intermodal competition succeeded in producing “just and reasonable” prices? How should the Commission determine whether the prices of telecommunications services are just and reasonable? What specific factors and metrics do the parties propose the Commission use to determine whether prices are just and reasonable?

The carriers incorrectly conclude that a competitive marketplace exists, and that rates are therefore “just and reasonable.” However, for the reasons stated above and especially in ORA’s OB at pages 60-61, ORA finds that the lack of effective competition

¹¹⁷ Coalition OB at 38.

¹¹⁸ Coalition OB at 39.

¹¹⁹ *Ibid.*

¹²⁰ *Ibid.*

¹²¹ Exhibit 16 at 29.

in the telecommunications market has resulted in prices that are not “just and reasonable.” The underpinnings of URF have proven to be inadequate, and the promise of URF that a competitive marketplace would flourish in the future, has not materialized with regards to wireline voice and broadband services.

E. What are the metrics and sources of data that you believe would be most useful and useable by the Commission to measure competition in both the retail and wholesale markets?

The carriers cite to “a number of public sources of data the Commission can use to monitor the state of voice service competition.”¹²² They cite to the Commission’s CD reports, the Center for Disease Control reports, FCC Local Competition Report, etc. Noticeably, these sources do not contain the most basic and necessary data needed to properly analyze the market, such as pricing data, earnings data, subscription data, availability data, or service quality data. ORA’s OB contains a comprehensive list of suggested data that should be collected if the Commission intends to properly monitor and analyze the market.

F. How can the Commission, consistent with its jurisdiction and authority, promote competition and reduce barriers to entry?

The carriers’ suggest to continue the policies of URF I, which the Commission has already found to be inadequate. ORA’s OB contains an exhaustive list of recommendations for the Commission to consider in a future phase of this proceeding, which may address just and reasonable rates, reducing barriers to entry and/or promoting competition. Again, as discussed above the State has mandated that the Commission has the duty to ensure competition is healthy and to protect consumers, providing the Commission with the full authority and jurisdiction to undertake this examination.

¹²² Coalition OB at 42.

IV. CONCLUSION

The carriers want to continue the same policies pursued by URF, even though the underpinnings of the URF decision have been found to be inadequate, and the marketplace is more concentrated than ever in the hands of a few large carriers and cable companies.

The carriers attempt to assure the Commission that the marketplace is effectively competitive because of the large number of “choices” in the market, including texting, emails, smartphones, VoIP, Skype and FaceTime, and prepaid services. However, the carriers conflate the concepts of “choice” and “substitutability.” These other services are not substitutes for wireline service, because they are different products and serve different telecommunications functions, as evidenced by the fact that they place no downward pressure on traditional landline or broadband pricing.

It is also important to note that the Coalition has not put forth any response to ORA’s analysis and testimony regarding broadband service or service quality, because the carriers continue to object to the relevance of those issues. However, the broadband market is fundamental to the future of telecommunication in California, because practically all forms of communication require broadband access. Service quality is also an essential aspect of measuring the effectiveness of the marketplace. The Commission correctly included those issues in the scope of this proceeding, and any final decision should include findings on those issues.

Respectfully submitted,

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